CLAIMS

WE CLAIM:

1. A magnetic disk comprising:

a glass or glass-ceramic substrate;

at least one under layer of a metal alloy applied over the substrate;

a magnetic layer applied over said seed layer;

a carbon layer applied over said magnetic layer; and

at least one bump formed by applying a beam from a near IR laser to the surface of the carbon layer.

2. The magnetic disk of claim 1 wherein a plurality of bumps form an annular area for a contact start/stop zone.

3. The magnetic disk of claim 1 wherein the at least one bump is used as part of a glide height calibration process.

4. The magnetic disk of claim 1 wherein the magnetic disk has a first side and a second side and wherein a plurality of bumps form an annular ring on a side of the disk to mark the side as not being used.

5. The magnetic disk of claim 1 wherein the at least one bump is part of a disk identifier.

6. The magnetic disk of claim 1 wherein the at least one bump is an elongated bump formed by passing the laser beam through a cylindrical lens system and wherein the bump shape and aspect ratio of the elongated bump are adjusted by adjusting the cylindrical lens system.

7. The magnetic disk of claim 1 further comprising a lubrication layer applied over the carbon layer.

8. The magnetic disk of claim 1 wherein a plurality of under layers are applied to the substrate comprising:

a layer of NiAl;

a layer of CrV; and

a layer of CoCr,

and wherein the magnetic layer comprises CoCrPtBo.

9. The magnetic disk of claim 1 wherein the at least one bump has a height between 10 and 25 nanometers.

10. The magnetic disk of claim 1 wherein the laser beam is produced by an Nd:Vanadate laser.

11. A method of manufacturing a magnetic disk comprising the steps of:

a) sputtering at least one under layer of a metal alloy over a glass or glass ceramic substrate disk;

b) sputtering as a magnetic layer over said under layer;

c) sputtering a hard carbon coating over said magnetic layer; and

d) applying a beam from a near IR wavelength laser to the surface of the carbon layer to form at least one bump.

12. The method of claim 11 wherein a plurality of bumps form an annular area for a contact start/stop zone.

13. The method of claim 11 wherein the at least one bump is used as part of a glide height calibration process.

14. The method of claim 11 wherein a plurality of bumps form an annular ring to mark a side of the disk for not being used.

15. The method of claim 11 wherein the at least one bump is part of a disk identifier.

16. The method of claim 11 wherein the at least one bump is an elongated bump formed by passing the laser beam through a cylindrical lens system and wherein the bump shape and aspect ratio of the elongated bump are adjusted by adjusting the cylindrical lens system.

17. The method of claim 11 wherein the near IR wavelength laser is an Nd:Vanadate laser.

18. A magnetic disk comprising:

a glass or glass-ceramic substrate;

at least one under layer of a metal alloy applied over the substrate;

a magnetic layer applied over said seed layer;

a carbon layer applied over said magnetic layer; and

at least one elongated bump formed by applying a laser beam, from a near IR laser, passed through a cylindrical lens system, to the surface of the carbon layer, wherein the aspect ratio and shape of the bump are adjusted by adjusting the cylindrical lens system.

19. The magnetic disk of claim 18 wherein the at least one bump is used as part of a glide height calibration process.

20. The magnetic disk of claim 18 wherein a plurality of bumps form an annular area for a contact start/stop zone.